# Are we messing with people's resilience?
# Analysing the impact of external interventions on community intrinsic resilience

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**Abstract**

People are by nature characterized by some degree of intrinsic resilience. The capacity of households and communities to deal with shocks and stressors (their resilience) is therefore not something that is simply "introduced" or "added" externally through the activities of a project, but instead something that exists internally, and that can be altered (strengthened or weakened) by external interventions. Using qualitative data from a resilience programme in Burkina Faso, we propose to explore more thoroughly the question of the dynamics between community intrinsic resilience and external interventions. For this, several related issues are investigated, including the possibility of erosion of intrinsic resilience mechanisms due to the effect of recurrent shocks, the potential crowding-out effect of external interventions on those intrinsic resilience mechanisms, and the exploration of detailed causal pathways describing the ways external interventions can create additional elements of resilience amongst the targeted communities. Some of the programmatic and research implications of the key-findings are highlighted.

**Key-words:** Resilience; crowding out effect; humanitarian interventions; shocks; Sahel.

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## 1. Introduction

Strengthening households' and communities' resilience (that is, their ability to deal with shocks)[1] has become a central component in the agenda of many bilateral and multilateral donors and development agencies in the last 10 years (DFID 2011; USAID 2012; UNDP 2013; FAO 2013; WFP 2013). Dozens of programmes have been initiated under the label of "resilience building" in the different regions of the world where local populations are recognized to be food insecure and their livelihood threatened by increased impacts of weather-related extreme events.

In assessing those interventions, a great deal of effort has been paid so far to trying to identify what interventions are the most effective at building the resilience capacities of the targeted households and communities (Constas et al. 2014; Smith et al. 2015; Béné et al. 2017; Levine et al. 2017; d'Errico et al., 2018). Less attention has been paid on the other hand at understanding how these interventions actually interact with the individual and collective *intrinsic* resilience mechanisms that were already at work in those communities prior to the start of those programmes. The objective of this paper is to explore this question. The premise of the analysis is indeed that external programmes and projects do not intervene in a vacuum. They build on something already existing. People are, by nature, characterized by some degree of intrinsic resilience -the fact that they are here and now, despite the past shocks and stressors they experienced is the evidence of this intrinsic resilience (Burton et al. 1993; Gaillard, 2007; Wisner et al., 2012; Rampengan et al., 2014). The resilience of households and communities is therefore not something that is "introduced" or "built" externally through the activities of a project, but instead something that exists intrinsically, and that can be altered (strengthened or weakened) by external interventions.

This last observation raises at least three questions. First, irrespective of the influence of external programmes, can this intrinsic resilience be damaged, or eroded, by too many, too frequent or too severe shocks or stressors? After all, the fact that some people are unable to bounce back after being affected by an adverse event, and may spiral down to lower levels of destitution, is the evidence that this intrinsic resilience is not all potent and can be overwhelmed. Secondly, there is currently an implicit assumption in the literature that projects' resilience or food security interventions are either neutral (when they don't work) or positive (when they work). Very little has been said about the possibility that the ways interventions actually *interact* with existing intrinsic resilience mechanisms can be more complex and nuanced, and as such can strengthen them (this is usually the objective of these resilience programmes) but can also potentially damage or weaken them. Third, in cases where resilience

[1] Resilience is a generic concept currently referred to and used in a large number of disciplines and associated bodies of literature, including social ecological systems, urban planning, child psychology, or material sciences. In this paper the concept of resilience is understood and used specifically in relation to the literature on humanitarian/disaster and food security interventions (see, e.g., von Grebmer et al. 2013; Constas et al. 2014; Béné et al. 2014). Within this literature a very generic definition of resilience would be the ability of people (as individual, households, communities, or society) to deal with shocks while limiting long-term implications (Constas et al. 2013).

interventions effectively work, the generic theory of change is one where the programme's activities are expected to strengthen households and communities' capacities (see e.g., Rose 2004; Chen et al., 2008; Constas et al., 2014; Béné et al., 2015). But how does it *actually* work? Here we propose to unpack this 'black-box' and identify more specifically the causal pathways through which resilience capacities are strengthened.

To explore more thoroughly those questions we use qualitative data and information generated during the evaluation of a resilience initiative funded by USAID in Burkina Faso. The paper does not claim to bring full or definite answers to all of those questions. It provides however some preliminary elements of analysis and identify some important areas of further research for practitioners and/or scholars interested in addressing those questions.

The rest of this paper is structured as follows: in section 2 the general background of this research is presented, including the resilience programme from which this research is derived (the USAID-funded RISE programme), the research questions and the general approach that guided the research, and the methodology and survey tools adopted to conduct the work. In section 3, the key-findings are presented in detail, organized around the research questions and key topics mentioned above. This is followed by a discussion where those key findings are revisited in the light of some of the more general issues currently debated in the wider literature on resilience interventions. The conclusion highlights briefly the programmatic and research implications of this work.

## 2. Background of this research

### *2.1. The RISE programme*

The programme from which this case study is derived is the 'Resilience in the Sahel-Enhanced' (RISE) programme. RISE was launched in February 2014 by USAID with a focus on the Sahel region. The Sahel is known for the recurrent crises (climate-related, political/security, and economic shocks) that affect the populations, in particular in rural areas. In this context the overall objective of the RISE programme was "to increase the resilience of the chronically vulnerable populations living in the agro-pastoral and marginal agricultural areas in two countries of the Sahel region, Niger and Burkina Faso" [2]. To achieve this objective, a combination of activities have been implemented by the RISE partners in the different districts where the programme has been operating. Although the exact *modus operandi* of those different packages of activities varies according to the partners and the specificities and needs of the local communities, they can broadly be grouped under three main generic components: (i) support to economic and financial processes, (ii) strengthening of local governance and institutions, and (iii) improved health and nutrition. Examples of specific activities under each of those generic themes include: diversification of economic opportunities; marketing of livestock and high potential crops; improved access to financial services (under the economic and financial processes theme);

[2] https://www.usaid.gov/sites/default/files/documents/1866/RISE_resilience_in_the_sahel_enhanced_.pdf

strengthening natural resource management; risk and disaster management; and conflict management (under the local governance and institutions); and, increased use of health and nutrition services; improved health and nutrition practices; increased consumption of nutritional foods (under the improved health and nutrition theme).

### *2.2. Objective and research hypotheses*

Analysing the interactions of external programme interventions with the intrinsic elements of resilience of households and communities requires us to start by looking more thoroughly at the mechanisms that are already in place, which people rely on, individually or collectively, to mitigate or recover from the impact of shocks and stressors. We proposed to call those mechanisms: community-based support mechanisms (CBSMs). Those include formal and informal mechanisms that have a clear function of supporting people (individuals or households) in the face of adverse events. Some of those mechanisms can be interpreted as specific forms of social capital. In effect social capital has already been associated to resilience (see e.g. Cassidy and Barnes, 2012; Aldrich, 2012) and is now well accepted as one of the building blocks of resilience capacities (Magis, 2010; Wilson, 2012; Woodson et al., 2016) -even if the actual relationship between social capital and resilience may be more complex that is generally assumed (Elliott et al. 2010; Coulthard 2011; Béné et al. 2016a). Thus, while we recognize in this paper that those CBSMs are part of social capital, we make the distinction between CBSMs and the wider concept of social capital as the latter is also associated with other processes that are not necessarily directed at responding to shocks and stressors.

In line with the interrogations presented in the introduction, the objective of the analysis is therefore to analyse those CBSMs, and seek to explore more specifically: (a) the potential erosions of those internal resilience mechanisms in the face of recurrent and /or too severe shocks and stressors; (b) the potential interactions (positive or negative) between the activities implemented by the RISE programme and those CBSMs, and (c) the more detailed causal pathways between programme activities and households/communities abilities to respond to shocks/stressors. In doing so, the paper offers some additional elements of information on the ways external interventions seems to complement intrinsic resilience.

The three main research questions that the paper proposes to explore are therefore:

**(i) Erosion of intrinsic resilience**: In the recent evaluation of another resilience intervention in the same region, the authors of the study observed that the repetition of severe droughts had led the members of the communities to alter some of their existing coping strategies. They noted:

> "A very common positive coping strategy was to rely on assistance from friends and relatives, including receiving money for food and borrowing money. As the downstream impacts of the drought began to accumulate, there was a steady erosion of social support making it harder for better-off households and community leaders to support those in need. (…) As the food security situation deteriorated further over time, (…), the governance systems in the communities were starting to be negatively affected (…). Other traditional

> ritual ceremonies where food redistribution takes place were also neglected. (…) In Jijiga, indications that coping abilities were becoming strained as the drought progressed include quarrels between spouses over food shortages, sometimes leading to divorces, and, at the community level, the breakdown of mutual support mechanisms." (Frankenberger and Smith 2015, p.67 – our emphasis).

One legitimate hypothesis that emerges from this is that under particularly harsh circumstances, when the impacts of shock and/or stressors are too severe or too frequent (or a combination of both), households or community's existing resilience may get 'overwhelmed' and progressively collapse and fail to deliver the expected support. This possibility of CBSMs erosion is the first hypothesis we propose to explore in this paper.

**(ii) Crowding effect of intrinsic resilience**: the second hypothesis we propose to explore more thoroughly is the potential interactions between RISE activities and CBSMs. The argument for this hypothesis has been laid out succinctly in the introduction section: since resilience is not something that is introduced externally but a capacity that exists already intrinsically within the community, any external activity that aims at strengthening resilience is likely to interact with this intrinsic component. Similar issues have already been discussed in the social protection literature and provide an empirical support for our hypothesis. In social protection the literature identifies two possible opposed scenarios in the context of social protection interventions (Devereux et al., 2013). On one hand, the 'crowding out effect' scenario, whereby social protection interventions and in particular cash transfers had been shown to have negative effects on existing informal mechanisms (Macauslan and Riemenschneider 2011). Indeed, some analyses have shown that the injection of external support (in the form of cash, for instance) can result in the weakening of the existing informal mechanisms of support (Cox et al., 1998; Dercon and Krishman, 2004). On the other hand, a scenario with a more positive outcome can also be observed, whereby external interventions improve or at least support the existing CBSMs. Hypher (2011), for instance, while examining the effect of several cash transfer programmes in sub-Saharan Africa, found that cash transfer can increase recipients' social status, strengthen their social capital and help build trust and community cohesion.

Based on this, a legitimate question is whether one or even the two of those scenarios were effectively observed in the villages where the RISE programme's interventions were being implemented. Four alternatives can be envisaged: (a) either a clear crowding out effect, or (b) conversely a clear 'positive' interaction, is observed at the village level, or, (c) a more mixed situation where a combination of negative and positive interactions are reported in the same village. Finally one can imagine (d) a situation where no interaction at all was observed by the respondents.

**(iii) Causal pathways of external interventions**: In addition (or in parallel to) their interactions with the existing intrinsic CBSMs (see above), the activities introduced by a specific programme are expected to strengthen or even develop new households' and communities' resilience capacities. The question then becomes: how does this work? Can we identify more precisely the causal pathways through which a given activity (or a group of activities) is effective at strengthening people's resilience? This question of impact pathways is critical, for whoever (donor, academic, practitioner) who is interested in increasing

the impact of those resilience interventions and in understanding why specific activities –or groups of activities- have greater effects than others.

### *2.3. General approach and data collection*

While an increasing number of resilience analysis tend to be quantitative and to rely on larger samples (e.g. Frankenberger and Smith 2015; Béné et al., 2017; Cissé and Barrett, 2018; d'Errico et al., 2018), the need for depth, detail, and context required in the present case points at qualitative approach as a more appropriate framework to explore the three questions presented above (Given, 2008; Berg and Lune 2012). The primary data were thus generated through a series of face-to-face in-depth key informants interviews (KIIs) and focus group discussions (FGDs) conducted in six of the villages where the RISE programme had been operating. Data collection took place in Aug.-Sept 2017. In each village, two FGDs (one with male and one with female respondents), and two to three in-depth KIIs (males and females) were conducted. In total 12 FGDs were therefore conducted (six with men and six with women) and 13 key informants interviewed. Those informants included: members of committees created through one of the RISE activities; local government officials responsible for relevant agriculture, livestock, or other food security programs; local individuals involved in private agro-pastoral trade and/or processing, providers of public services (e.g. health, education); or local resource persons employed by other development actors in the area. The members of the FGDs were household members benefitting from one or several activities of the RISE programme.

The interviews (FGDs and KIIs) were administrated by a team of four local researchers organized into pairs (two men – two women) working in parallel. Two tape-recorders were used for the entire time of the interviews in order to ensure that no information was lost during the transcription of the discussions. The interviews were conducted in local languages (Mooré, Fufuldé, and Gourmantché) and would last between 45 minutes to 2.5 hours (FGDs were in general taking more time than KIIs) depending on the level of loquaciousness of the respondents. The services of a local translator were needed in only one village to ensure good communication between the research team and the members of the FGD. As much as possible the number of participants in the FGDs was kept around 10 members in order to ensure a good diversity of views while maintaining a manageable group size.

### *2.4. Interpretation and data analysis*

Because the survey was implemented in a limited number of villages, this research does not claim to offer a full representability (in the statistical sense) of the whole population participating in the programme. This situation has some implications. In particular, it means that the analysis does not have any strict hypothetico-deductive element and that a special attention needed to be paid in the way the findings are interpreted. While trend and patterns emerging from the different responses collected

across the different villages will be highlighted, any general conclusions beyond the study context would have to be considered as *tentative propositions* (informed assertions) only.

Furthermore, because the approach was qualitative (based on open-ended questions administrated through FGDs and KIIs), the nature of the information generated is mainly subjective and reflects the respondents' perceptions. In that context, part of the challenge was to interpret the results while acknowledging the potential limitations of such data. In particular there was a risk that some of the responses given by the respondents could reflect an attempt by those individuals to ensure that the RISE partners will continue support their communities in the future. Therefore, specific instructions had been given to the research team to collect detailed information not simply on whether the RISE activity contribute to people's resilience, but also about *how exactly* the RISE activities effectively affect people's ability to deal with shocks and stressors, *when* this happens (i.e. for which specific shock and/or stressors), and *who* benefitted from it. As a result, the research team was able to rapidly discard the responses that were not substantiated by a clear pathway and explore further only cases of strong evidence where the respondents could document clearly and provide evidence on how the activities were effectively contributing to help people facing specific shocks or stressors.

To illustrate –and substantiate– some of the statements made in this analysis, we use quotes and excerpts extracted from the transcripts of the interviews. The names of respondents and villages have been removed however and replaced by letter to protect anonymity. Quotes are in English after having been translated by the research team from local language to French -and ultimately in English for the preparation of this paper.

## 3. Results

### *3.1. Traditional/informal community-based support mechanisms*

In this first subsection, the key-findings related to the existence of traditional/informal community-based support mechanisms (CBSMs) are presented. The assumption is that those CBSMs, which have been adopted by the communities over the course of the last decades/centuries, play a critical role in the intrinsic resilience of the community. Understanding their nature, mechanisms, and effectiveness in protecting people from, and mitigating effects, of shocks and stressors is therefore a key initial step in our analysis.

The survey confirms that both traditional (informal) and more formal CBSMs co-exist in every village, which for their majority have been established prior to the start of the RISE program. This corresponds to what was expected, in line with the description that social and anthropological literature has been discussing under different names: positive reciprocity, altruism, almsgiving, reciprocal altruism (see e.g. Trivers, 1971; Putnam 2000; Komter, 2007; Batson et al., 2011). The data also indicates that the nature of those CBSMs is remarkably varied. We use a simple framework (**Fig.1**) to capture and 'condense' this diversity of mechanisms along two axes: a 'to whom from whom' axis and a 'what and how' axis. The

'from who to who' axis refers to the identity of those who contribute to the CBSM (it could be one individual or a whole group) and those who benefit from this CBSM (again, it could be one single individual/household or a whole group) and the 'what and how' axis refers to the nature of the transaction (cash, food or in-kind) and the process (free gift or loan). Within those two dimensions, the different CBSMs range from cash or in-kind gift to a household that has been recognized as specifically affected (e.g. a family which has just lost the main breadwinner), to a monetary loan to a household that is temporarily short in cash, to more collective initiatives where a group of women decide to collectively self-finance their economic activities or cultivate a communal plot.

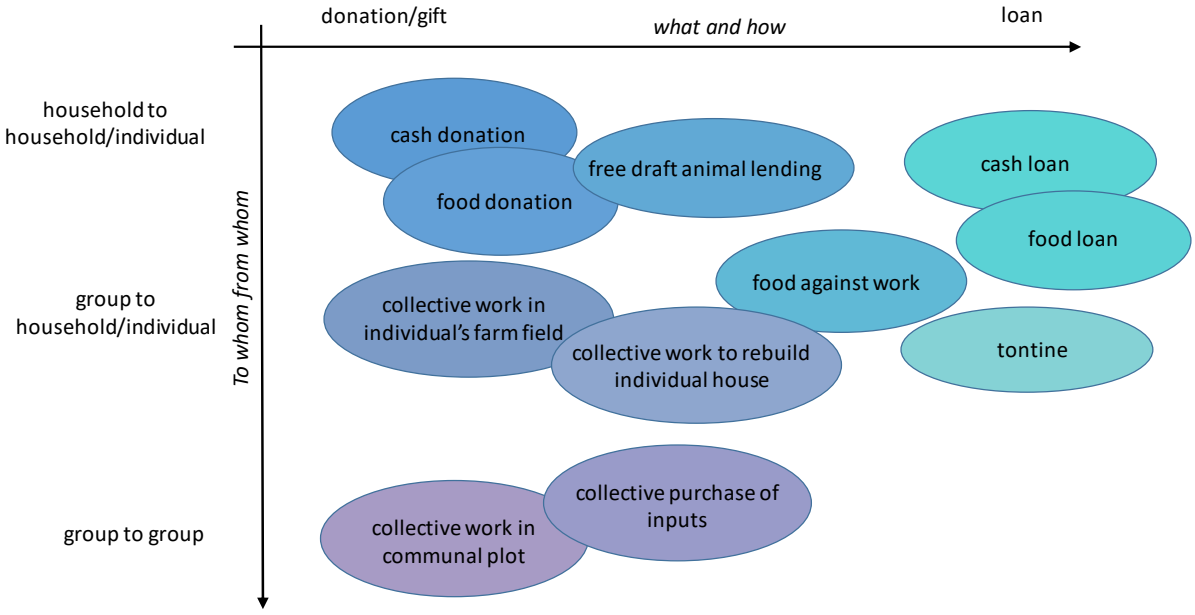


**Fig.1.** The different types of community-based support mechanisms (CBSMs) identified during the survey

Also relevant for our analysis is the question of when those different CBSMs are activated, to what extend they are "triggered" by the occurrence of specific adverse events, and who benefits from them. Data indicates that small gifts of food or cash are often used between siblings and close neighbours when one has been hit by some adverse event. The members of the male FGD in village S explained for instance "Mutual support to an affected parent or neighbour is usually the first aid [that people give] in the case of drought before others supports arrive".

Cash or food gifts may also be used with non-relatives in the case of extraordinary events. In one village for instance, a fire had destroyed the houses and stored crops of three families. All three received gifts

from many members of the community, which was critical to help those families recover. "In the case of the burning down of crop storages, the victims received support in the form of food and cash thanks to the donations and assistance that exist in the village" (Male FGD, Village F).

Another important category of CBSM described by the FGDs is a form of collective support offered by community groups (either a group of young men or a group of women) in the form of labour carried out in the plots of families who have been affected by an adverse event such as the death of the household head or their temporary inability to work (e.g. illness). "If we cultivate in the field of a sick person, it is as if he, himself, had worked there in his field, so he may have something to eat"(Female FGD, Village A). This type of collective support was described in five out of the six villages surveyed.

The third generic type of CBSM mentioned by the respondents in every village were the "*tontine*"[3]. Those collective arrangements fall under CBSM in the sense that they are established by (female) members of the community (as such they are community-based initiatives) and they are established with the objective to support their own members (thus, are support mechanisms). However, while the link between the first two types of CBSM mentioned above and their contribution to people's resilience is straightforward in that they are clearly designed and implemented to help households or individuals who have been impacted by adverse events, the contribution of the *tontines* to the community members' resilience is not so explicit. In theory, *tontines* are established not in a direct attempt to mitigate the impact of shocks but rather to offset the lack of cash households and individuals face even to make a small investment. The comment made by the members of the female FGD in village Y confirms this : "In the event of drought, (...) *tontine* is not used immediately to recover from the shock because there is no arrangement between members when one is affected by the drought and their turn [to receive money] has not arrived yet" (Female FGD, Village Y). At the same time, the members of the same FGD also recognized that in some cases the *tontine* rotation can be altered so that the next beneficiary could use the cash in relation to some specific form of shock. This is the practice for instance in the case of illness "In case of sickness, for example, each woman contributes according to her means to give to the person affected by the illness" (Female FGD, Village Y).

The *tontine* also differs from the two previous examples of CBSM in the sense that the persons who can benefit from it will usually have to be a member of the group who created the *tontine* – in contrast to the other abovementioned mechanisms which seemed to be more "universal". In that regard it has been difficult to determine from the discussions whether the membership to *tontine* was open for anyone.

A last worth-noticing type of CBSM mentioned during the interviews is a system of 'loans' of livestock, similar to what is called *Habbanayé* in Niger, in which poor households who lost or don't have livestock can keep one of the offspring of the herd(s) they have been given charge of by the owner(s). This system was mentioned in village F (in Centre-Nord region), but not in the villages surveyed in the North - where livestock is a central element in the local economy. In fact, in the two villages we visited in that

[3] "*tontine*" is the word used in the Francophone Sahel region to refers to women's informal rotating savings and credit group.

region (Village Y and A), informants explained that livestock is too 'valued' to be given away. People would prefer to give cash or food to people who are in need. In other words, while the principle of CBSM is with no doubt embedded in the social tissue of the communities, there are also some limits to how those support mechanisms are being "institutionalized" and operated.

### *3.2. Erosion of the CBSM*

The first hypothesis that we proposed to explore in line with what has been advanced in the recent literature is that existing CBSMs may get 'overwhelmed' in the case of severe or repeated shocks.

The analysis of the FGDs and KIIs shows two contradicting responses emerging from the data. Some respondents refute the hypothesis with statements such as "They [other members of the community] are our brothers, we will help them as long as we can" (Male FGD, Village S) or " (...) the repetition of events does not erode the mechanisms of mutual aid because tomorrow I may be in the same situation" (KII No.1, Village D) or "The mechanisms of mutual aid (...) continue, they never stop supporting the people. Assistance continues until death" (KII No.1, village Y).

On the other hand, we also encountered respondents who admitted: "If we continue helping, we will eventually have to leave the village because we will also need help" (Female FGD, Village F) or "Before, it was easy to make donations, but now the gifts have diminished a lot except for relatives ... " (Male FGD, Village K) or "The repetition of shock has decreased the volume of the gift because you have to solve your own problem before thinking of helping the neighbour or the parent" (Male FGD, village D).

What this divergence in responses suggests is that the CBSMs which are "measureable", such as gifts or loans, seem to diminish in quantity or frequency with the repeated impacts of (too frequent) shocks, but the principle of the CBSMs does not disappear or cease altogether. "Repetition of shocks will not kill this mechanism, but it will diminish it because we cannot always help people, even if we have the will" (KII No.2, Village S). This also means, however, that the supporting effect of those CBSMs is likely diminished. In sum, as assumed by Frankenberger and Smith (2015), we do observe a form of erosion of the CBSM due to repetition of shocks.

### *3.3. Crowding out effect*

The second hypothesis explored in this paper refers to the potential interaction between the existing CBSMs and the newly introduced activities of the RISE programme. The analysis of the responses seems to indicate that, overall, the impact of the programme activities on the existing informal and formal support mechanisms is mainly positive. Only two individual respondents mentioned some negative effect: the KI No.1 in village A who mentioned that "Donations have decreased with the arrival of the programs because they [the villagers] feel the programs can now help people"; and the KI No.2 in village K, who stressed that the members of the community have stopped the collective field work on

communal lands because of the new groups that have been set up by the RISE programs. That same key informant acknowledged, however, that all other mechanisms (such as donations and loans) have positively improved.

All other individual or collective accounts that were recorded through the KIIs and FGDs on this question suggest rather strong and positive interactions between the RISE activities and the existing CBSMs. “These activities mobilize each members of the different households, neighbourhoods and put them together (...) for us this strengthens social cohesion” (Male FGD, village A). A closer look at the data allowed us to identify three main impact pathways around this process of positive interaction, as follows:

**Increase in social interactions** - the first of those impact pathways relates to the improved social interactions between members of the community created of the new activities. Several respondents explained that the implementation of the programme activities led people to meet with the members of the groups to which they belong, creating more interactions between the members of those groups, thus reinforcing positive social dynamics: “Most of the activities of the RISE program help the population to meet each other either for training workshops or for demonstrations or sensitizations. These different occasions allow those to meet, discuss, and give advice or information. (...) Me, I am from the neighbourhood called B, he [another member in the group interviewed] is from another quarter; since the arrival of VIM and REGIS-ER [two implementing partners of RISE], there is much interaction and it strengthens social interaction” (Male FGD, village S).

**Increase in the ability of individual households to contribute to CBSMs** – in several occasions, respondents mentioned the fact that the making of additional cash-income or the increased crop yield generated through RISE activities allowed them to give more to the individuals or households who were in need. “With the presence of these programs, self-help has even increased, [and] we can draw a larger sum to help those affected” (Female FGD, village K); “Thanks to the project the villagers now have money for their needs. (...) they [the women of the village] say that other times it was very hard. This is no longer the case today and as it is improving now, they have a little more equipment or money to help others.” (Female FGD, village A). A similar comment was made by members of the female FGD in village F.

This increased ability to give does not materialize only through individual donations, but also through collective mechanisms. Two institutions were explicitly mentioned:

- *Tontine* / self-financing groups: “SECCA [Self-managed Community Savings and Loan Strategy] increased the tontines and allowed men too to enter this system which increased lending money to the village level" (KII No.2, Village S); "Now that we have more to sell, we can contribute to the tontine larger amounts because we have enough cash” (Female FGD, village F) (also mentioned by KII No.1 in village F).
- The church: “More food is being given now to the church, which also allows it to reach more

vulnerable people" (Female FGD, village D); "There is a strengthening of the church's action towards the poorest because the Faso program [another implementing partner of the RISE programme] provides support to the church for the benefit of vulnerable groups." (KII No.2, village D)[4].

**Increase in the knowledge and capacities of the members of the informal or formal arrangements** - the third way existing CBSMs had been reported to be positively affected by RISE activities is through the enhanced capacities and increased skills/knowledge of their members. Many respondents mentioned that activities around governance and more technical knowledge provided through some of the RISE interventions have been instrumental in enhancing the ability of various formal or informal committees to perform their duties. This concerns particularly the VDC (Village Development Council). "they [the VDC] are more dynamic and more effective now" (FGD male village F); "These trainings have empowered VDC members in the performance of their duties and this has allowed them to better play their role in case of a shock. (KII No.2 village K) (also mentioned by KII No.2 in village F and by male FGD and KII No.2 in village D and male FGD in village F). The other committee that was explicitly mentioned was the forest management committee by the female FGDs in villages A and K.

### *3.4. Pathways to resilience - direct effect of the RISE activities*

The previous section demonstrates how the RISE activities interact (mainly positively) with the existing resilience capacities of the communities. Our third research question was aimed at complementing this analysis by looking at the ways those RISE activities generate *additional* element of resilience. The objective was to identify the causal pathways through which external activities are recognized to contribute to people's abilities to deal with adverse events.

**Table 1** synthesizes the key-findings[5] that emerges from the discussions with the different respondents, while the text below provides a more detailed description. The first column of Table 1 lists the RISE activities that were mentioned by the respondents, while the second column details the causal pathways (that, is how the RISE activities were said to affect people's ability to deal with shocks and stressors). The third column indicates which adverse events were specifically mentioned during the interviews, while the fourth column specifies who was said to benefit from those activities. The last column on the right hand side indicates the coded identity of respondents who mentioned those processes. To some extent that last column also provides a very rough indicator of the consensus around the resilience contribution of the activities considered in that same row[6].

[4] By "church" the informants mean "the church community". In Burkina Faso, approximately 30% of the population is Christian.

[5] The responses and quotes listed in the table have been selected as representative of the types of responses reported. They do not represent the entire set of responses.

[6] Note however that some activities have been tried / implemented in a larger number of villages than others, so the potential contribution of one specific activity to strengthen the resilience of people is not even strictly comparable across the villages.

[insert Table 1 here]

What emerged from the analysis is that respondents have generally no problem associating specific RISE activities with a resilience pathway. Respondents were in particular able to articulate in a relatively clear manner how specific activities were effectively contributing to people's ability to deal with shocks and stressors. Examples (extracted from Table 1) include how the increased use of organic manure and compost encouraged by the programme helps the fertilization of arable soil, leading to boost its ability to retain moisture, which allows the soil to better resist drought; or how the sensitization activities implemented by RISE partners about the risk periods of livestock and poultry epidemics allows households to take preventive measures (vaccination) which resulted in reduced frequency of epidemic outbreaks.

The data, however, also suggests that there is no one single resilience building pathway. Every activity that was identified by the respondents as having a positive impact on their life/livelihood in response to a specific shock/stress seems to be characterized by a unique causal pathway in the way it helps those people (individual households or a group).

Table 1 also reveals the existence of two different types of resilience capacity building activities: (i) those which seem to be more specific to one particular types of shock – for instance the training around mowing techniques and hay conservation or on growing improved rice seeds were both recognized by respondents to help households in relation to potential impact of drought; and (ii) those activities that were perceived as being useful to build or boost resilience capacities in relation to not just one specific, but several types of shocks – such as the self-help group or the donation of seeds of millet and sesame. Those appear to be more generic in the way they help households in the face of shocks and/or stressors.

A closer look at those positive examples reveals however that the respondents almost systematically associate the resilience element of any activity to its ability to generate (additional) income in relation to food security. This finding applies to interventions such as cash transfers where the money was used to buy food (Female FGD, village F) but also to activities like developing rice production in lowlands where rice production was then said to help reducing food insecurity through the purchase of sorghum or maize through the selling of rice (Male FGD, village S); or for the *Habanayé* activity, which was said to allows people to access additional financial resources by selling animal in case of difficulty or to initiate another activity (Female FGD, village S). Other (expected) examples include the self-help group (tontine) where "the money received from the tontine is used to buy food, to make small trade. This activity also creates savings that can be used in case of difficulties" (Female FGD, village S); or animal donation where "the livestock / poultry transfers enhances the income diversity that will be used to purchase food in the event of prolonged drought." (KI No.2, village F). More surprising was the case when people also associate this capacity to generate money with WASH activities, for instance where "awareness-raising on hygiene, including washbasins, culinary demonstrations, etc. are said to have made it possible

to reduce expenditure on the health of the population. This reduction in spending has allowed households to save or direct their money towards the purchase of food" (Female FGD, village S).

## 4. Discussion

The underlying drive of this paper was the recognition that resilience is not an attribute that emerges simply "out of nowhere" through the effect of external resilience projects or interventions. The individual, households, and communities that are targeted by those external interventions are by nature *already* displaying some level of resilience. Resilience is in this sense an *intrinsic characteristic of people and society* (Gaillard 2007; Campbell 2009; Wisner, et al. 2012; Rampengan et al. 2014; Ahmed et al. 2016). Yet, too often current evaluation seems to assume that external interventions operate in a vacuum, and that the only two possible outcomes of those projects are either "more resilience" -when the activities implemented by the project are successful, or "neutral – did not do harm" when the project failed somehow to build resilience capacities. If we recognize however that resilience is an intrinsic characteristic of the households and communities where those interventions are implemented, then a third possible outcome needs to be considered; one where the activities of the external programme may erode, weaken or annul the effects of the resilience mechanisms already at work within those communities. This possibility raises in particular the question of the potential 'crowding out effect' of resilience interventions on the (formal and informal) collective support mechanisms already at work in the targeted communities. Building on this argument, and cognizant of similar debate in other part of the literature on social protection (e.g. Devereux and Getu, 2013; Pavanello et al., 2016), the main objective of this paper was to explore more thoroughly the possible different interactions (positive, negative, other) that are being observed between external interventions and already existing resilience mechanisms at community level. For this, we used data generated through the detailed evaluation of a qualitative case study –the RISE programme- in Burkina Faso.

An initial part of the work consisted in identifying the community-based support mechanisms (CBSMs) that were already existing in the communities targeted by the RISE programme. The data showed that both traditional and more formal CBSMs co-exist in every village we surveyed and that for their majority those have been established prior to the start of the RISE program. The data also indicates that the nature of these CBSMs is remarkably varied. This result is in line with the description that social and anthropological literatures have generally proposed for this region where many forms of similar social support mechanisms have been described as early as the 1960s (Mitchel 1969; Ngwenya 2003; Habtom and Ruys 2007). A more recent part of the literature makes an explicit link between those different forms of social capital and resilience. In effect social capital in its various and diversified forms (including capacity for collective actions, mechanisms of reciprocity, local 'good' governance, or more general 'positive' social norms) is now often argued to be important for resilience (Adger, 2003; Aldrich, 2010; Bernier and Meinzen-Dick, 2014). Some recent empirical analysis confirms those assumptions (e.g. Elliot et al., 2010; Magis, 2010; Wilson, 2012; Woodson et al. 2016). In other cases, however, empirical analysis suggests that we should avoid too rapid generalisation (Béné et al. 2016a). Coulthard (2008; 2011), for instance, looking at the ability of rural communities to adapt to change, observed that in

some circumstances 'positive' dimensions of social capital such as strong social identity or well-established traditional resource management systems may prevent households or communities from engaging in the necessary transformation, thus leading them to become less resilient than other communities with lower level of social cohesion. In many other cases, however, positive social norms and "good" local governance have been shown to be critical in creating or boosting the capacities of communities to adapt to change (Becker et al. 2008; Schwarz et al. 2011; Aldrich, 2012; Woodson et al. 2016).

One hypothesis that has been advanced recently is that existing informal CBSMs may get 'overwhelmed' by too severe shocks. Frankenberger and Smith (2015) for instance using some high frequency monitoring data from Ethiopian communities affected by recurrent droughts, described how community-based support mechanisms seem to progressively break down under the growing pressure of those repeated drought events. The observation of this breakdown[7] also resonates with other recent empirical analysis that highlights the "cumulative and continuous effect of shocks and stressors" and challenges the conventional model shock -> response -> recovery as being too simplistic and missing the more nuanced dynamics around resilience recovery (Béné et al. 2016a –see in particular their Fig.7 p.165). In the case considered under the present research (where drought has also been repetitively impacting communities), the analysis suggests some similarity with those cases. In particular the data indicates that the responsiveness of some of the CBSMs diminish in quantity or in quality when too many people in the same community are faced by the impacts of covariant and/or recurring shocks. The respondents were insisting however that in general even if they appear weakened, CBSMs do not disappear or stop completely. This last comment raises the interesting question for future research, about the "resilience of resilience mechanisms".

The second major area of interest for us was the question of the potential effect of the RISE interventions on those CBSMs. As highlighted in the introduction, raising such question was justified in the light of cases encountered in other domains such as social protection where the question of the impact of social protection interventions (in particular in the form of food or cash transfer) on the existing informal institutions of the targeted communities is still being debated (see e.g. Macauslan and Riemenschneider 2011; Babajanian and Hagen-Zanker 2012; Pavanello et al. 2016).

As reminded by Devereux and Getu (2013) and others (e.g. Pavanello et al., 2016), the effects of these programmes on informal risk sharing and solidarity mechanisms (e.g. reciprocal gift-offering or borrowing) can be complex and do not systemically lead to positive outcomes. Instead, inter-household tension and sometimes conflicts can emerge. In sum, the conditions under which formal transfers do complement and strengthen intra-community dynamics and support mechanisms – or in on the contrary, 'crowd out' and weaken them – are still poorly understood (Devereux et al., 2013). We anticipate that a similar debate will soon start in the resilience community, fed by the growing number of interventions that are being initiated every year in different parts of the world. While many amongst

[7] Making the parallel between the two cases is useful even if we also need to acknowledge the potential role of regional specificities: Frankenberger and Smith's observation was made in the context of agro-pastoralist communities in the *Horn of Africa*, while we discussed here *Sahelian* agro-pastoralist communities.

us (practitioners, NGOs, academics, development agencies) may still be in a honeymoon mood with the concept of resilience, some more critical voices are likely to raise in the near future and request us to pay more attention to these interaction issues.

In the case of the RISE programme, the analysis of the respondents' answers offers a relatively unambiguous picture regarding those interactions: overall, the vast majority of the key informants consider that the effects of the RISE program on the existing CBSMs are positive. Three causal pathways were subsequently identified which capture this overall positive outcome: (i) RISE activities were said to offer opportunities to interact positively with other members of the community, thus strengthening the social cohesion of the community (the 'bonding' element of social capital – Putman, 1995); (ii) RISE activities were also said to increase the financial ability of individual households to contribute to the CBSMs –in particular by increasing the amount of cash or food they could offer through the CBSMs; and finally (iii) RISE activities were also said to contribute to strengthen the existing CBSMs by increasing the capacities of the members of the informal or formal committees which constitute those CBSMs.

The last part of our research aimed at unpacking the 'black-box' of resilience interventions and identify more precisely the causal pathways through which programmes' activities contribute to strengthen the abilities of the targeted population to handle shocks and stressors. While a substantial –and still growing- body of literature is being published on resilience and resilience interventions (see e.g. Davies et al. 2015; Pelletier et al. 2016; Béné et al. 2016b; 2017; Brück et al., 2018; d'Errico et al. 2018; Tebboth et al. 2019), the current understanding of the determinants of people's resilience is still incomplete. Beyond the fact that research on resilience in the context of food security and humanitarian interventions is still relatively new, one primary reason for this incompleteness is certainly the fact that resilience, being a latent variable, is by nature difficult to measure (Frankenberger and Nelson 2013; Béné 2013; d'Errico et al. 2016). Another potential reason is the fact that a large proportion of the studies/reports that are currently available in the literature are based on a more quantitative approach, building on large samples but relatively simplistic theories of changes, which do not necessarily allow a detailed analysis of the causal pathways between the initial activities and the various intermediary steps constituting the resilience building process[8]. Finally some recent empirical studies also reveal that beyond the effect of tangible elements such as income, assets or access to material support, a substantial part of people's resilience may be embedded in more subjective, cultural or even psychosocial elements such as self-efficacy, self-esteem or risk aversion (Béné et al. 2019). This observation is in agreement with the literature on disaster risk reduction which also shows that social action, shaped not only by physical but also psychological experiences, is important in understanding at-risk communities (Cronin et al. 2004; Becker et al. 2008; Kelman and Mather 2008) and that failing to

[8] Note that in all those considerations, resilience is presented as a positive characteristic (in a normative sense) of individuals, households or communities, i.e. something one should protect/maintain, strengthen, or even build. This discussion does not therefore reflect well the literature which is more critical about resilience, referring to it as a 'blurry' or 'slippery' concept (e.g. Davidson 2010; Davoudi 2012; White & O'Hare 2014). These authors argue in particular that before the concept of resilience can be accepted as a new paradigm for development, it needs to be embodied in a more rigorous theoretical and empirical framework –see however DeVerteuil and Golubchikov (2016) for a counter-narrative.

recognize the local cultural context of those communities reduces the effectiveness of disaster risk reduction (Hewitt 1983).

In the present case the need for a more detailed and nuanced exploration of the dynamics and contextualization around the process of resilience building was addressed by adopting a qualitative approach based on direct discussion with key informants –see also Maxwell et al. 2015.

In the case of the RISE programme, our analysis shows that respondents have generally no difficulty associating particular RISE activities with a specific resilience pathway- especially when the exploration of the (rather academic and abstract) concept of resilience was carefully reframed as a series of questions around concrete issues of *what* shock X, *how* activity Y helped with respect to that shock (recovery path), and *who* benefited the most and *why*. In this context, respondents were able to articulate in a relatively clear manner how specific activities were contributing to people's ability to deal with shocks and stressors. In that regard, the analysis reveals the existence of two different types of resilience building activities: (i) those which appear to be more 'specific' to a particular type of shock or stressor –for instance activities that would be explicitly associated with recovery (or prevention of) drought; and (ii) those activities that are perceived as being more 'generic' and useful to build or boost resilience capacities in relation to several types of shocks.

The data also reveals that the resilience element of an activity is almost systematically associated by the respondents to its ability to generate additional cash to address food security. Whether this cash -> resilience association is correct would need to be explored more systematically. It certainly appears to be in line with other (more quantitative) analyses which have already highlighted the important role that income or more generally assets seem to play in relation to resilience (Hoddinott, 2006; Carter et al., 2007; Prowse and Scott, 2008; WFP, 2013; Smith et al., 2015). But this importance given to cash could also simply reflect the hard daily reality faced by many households affected by cash shortage, for whom any additional influx of cash would almost systematically mean improving access to food.

## 5. Programmatic implications

This paper started with a (slightly provocative) question: "are we messing with people's resilience"? The justification for this interrogation was the recognition that *people and societies are resilient by nature* (Rampengan et al. 2014; Ahmed et al. 2016) and, therefore, that any external intervention aiming at "strengthening" this resilience is in effect interacting with some pre-existing systems / social arrangements. While most of those resilience interventions are driven by humanitarian or development objectives and can be seen as genuinely aiming at doing good, one cannot rule out the hypothesis that in some cases the interventions may lead to unintended negative effects and result in harming or weakening the existing capacities of the communities to take care of their own members, thus threatening this intrinsic resilience.

In the case of the project that had been used as case-study for this research (the RISE programme), the data seems to indicate that such a negative scenario has not happened –at least not at a level that was

detectable through our investigation. But the possibility of such scenario is real – especially in situations where no assessment/diagnostic of the existing community-based support mechanisms is conducted prior to the start of the intervention. Even though the majority of the partners (local NGOs) implementing those resilience programmes are usually familiar with the region/communities where the intervention is taking place, and the choice of the subsequent activities may result from a participatory process involving the communities themselves, the overall theories of change underpinning those resilience interventions generally derives from pre-designed templates used at the proposal-stage by the staff of the resource mobilization division of the implementing international NGOs (often based at headquarters located thousands of miles away from the field), or even sometimes imposed directly or indirectly by the donors. There is very little chance that those templates properly incorporate the local-specificity of those CBSMs and propose activities that perfectly integrate those pre-existing resilience mechanisms into the Theory of Changes of the programme.

Acknowledging this reality would be an important first step in improving our abilities to deliver more effective resilience interventions. To do so, the existence of those intrinsic support mechanisms should be more carefully integrated into the theory of change of any programme which claims to improve people resilience, and more in-depth analyses of the dynamics between community intrinsic resilience and external interventions should be systematically conducted at the monitoring and evaluation stage of those programmes.

## References


Adger, W.N. (2003). Social capital, collective action, and adaptation to climate change. *Economic Geography*, 79 (4), 387–404.

Ahmed, B., Kelman I., Fehr H.K. & Saha M.L. (2016). Community resilience to cyclone disasters in coastal Bangladesh. *Sustainability*, 8, 805.

Aldrich, D. (2010). Fixing recovery: social capital in post-Crisis resilience. *Journal of Homeland Security*, 6, 1–10.

Aldrich, D. (2012). *Building resilience: Social capital in post-disaster recovery*. Chicago: University of Chicago Press.

Babajanian, B., & Hagen-Zanker, J. (2012). *Social protection and social exclusion: An analytical framework to assess the links*. ODI Background Note. London: Overseas Development Institute.

Batson, C., Ahmad, N., & Stocks, E. L. (2011). Four forms of prosocial motivation: Egoism, altruism, collectivism, and principlism. In D. Dunning, D. Dunning (Eds.) *Social motivation*. New York, NY US: Psychology Press (pp. 103–126).

Becker, J., Johnston, D., Lazrus, H., Crawford, G. & Nelson, D. (2008). Use of traditional knowledge in emergency management for tsunami hazard: A case study from Washington State USA. *Disaster Prevention and Management*, 17(4), 488–502.

Béné, C. (2013). *Towards a quantifiable measure of resilience*. IDS Working Paper 434. Institute of Development Studies, Brighton 27 p.

Béné, C., Newsham, A., Davies, M., Ulrichs M., & Godfrey-Wood R. (2014). Resilience, poverty and development. *Journal of International Development*, 26, 598–623.

Béné, C., Frankenberger T., & Nelson S. (2015). *Design, Monitoring and Evaluation of Resilience Interventions: Conceptual and Empirical Considerations*. IDS Working Paper 459, Institute of Development Studies, 23 p.

Béné C., Al-Hassan R., Amarasinghe O., Fong P., Ocran J., Onumah E., Ratuniata R., Van Tuyen T., McGregor J.A., & Mills D.J., (2016a). Is resilience socially constructed? Empirical evidence from Fiji, Ghana, Sri Lanka, and Vietnam. *Global Environmental Change* 38, 153-170.

Béné C., Headey D., Haddad L. & von Grebmer K. (2016b). Is resilience a useful concept in the context of food security and nutrition programmes? Some conceptual and practical considerations. *Food Security 8*(1), 123-138.

Béné C., Chowdhury F.S., Rashid M., Dhali S.A., & Jahan F. (2017). Squaring the circle: Reconciling the need for rigor with the reality on the ground in Resilience Impact Assessment. *World Development*, 97, 212-231.

Béné C., Frankenberger T., Griffin T., Langworthy M., Mueller M., & Martin S. (2019). "Perception matters": New insights into the subjective dimension of resilience in the context of humanitarian and food security interventions. *Progress in Development Studies* 19(3):186-210.

Berg, B.L., & Lune, H. (2012). *Qualitative Research Methods for the Social Sciences* (8th ed.) Pearson, Boston.

Bernier, Q., & Meinzen-Dick, R. (2014). *Resilience and social capital*. Building Resilience for Food and Nutrition Security Conference Paper No. 4. International Food Policy Research Institute, Washington, DC 26 p.

Brück T., d'Errico, M., & Pietrelli, R. (2018). The effects of violent conflict on household resilience and food security: Evidence from the 2014 Gaza conflict. *World Development*, 119, 203-223

Burton, I., Kates, R.W., & White, G.F. (1993). *The environment as hazard*, 2nd ed. New York: Guilford Press.

Campbell, J.R. (2009). Islandness: Vulnerability and resilience in Oceania. *Shima: The International Journal of Research into Island Cultures*, 3(1), 85–97.

Carter, M., Little, P., Mogues, T., & Negatu, W. (2007). Poverty traps and natural disasters in Ethiopia and Honduras. *World Development*, 35 (5), 835–856.

Cassidy, L., & Barnes, G. (2012). Understanding household connectivity and resilience in marginal rural communities through social network analysis in the village of Habu, Botswana. *Ecology & Society*, 17(4): 11.

Chen S.C., Ferng J.W., Wang Y.T., Wu T.Y., & Wang J.J. (2008). Assessment of disaster resilience capacity of hillslope communities with high risk for geological hazards. *Engineering Geology*, 98(3–4), 86–101.

Cissé J.D., & Barrett C.B. (2018) Estimating development resilience: A conditional moments-based approach. *Journal of Development Economics*, 135, 272-284.

Constas, M., Frankenberger, T. & Hoddinott, J. (2013). *Resilience measurement principles - toward an agenda for measurement design*. Report No.1 Resilience Measurement Technical Working Group, Rome: Food Security Information Network (FSIN), Food and Agriculture Organization (FAO) and the World Food Programme (WFP), 35 p.

Constas, M., Frankenberger, T., Hoddinott, J., Mock, N., Romano, D., Béné, C. & Maxwell, D. (2014). *A common analytical model for resilience measurement: causal framework and methodological options*. Food Security Information Network (FSIN) Technical Series No. 2, Rome: World Food Programme.

Coulthard, S. (2008). Adapting to environmental change in artisanal fisheries—Insights from a South Indian lagoon. *Global Environmental Change* 18(3): 479–489

Coulthard, S. (2011). More than just access to fish: the pros and cons of fisher participation in a customary marine tenure (Padu) system under pressure. *Marine Policy*, 35, 405–412.

Cox, D., Eser, Z., & Jimenez, E. (1998). Motives for private transfers over the lifecycle: An analytical framework and evidence from Peru. *Journal of Development Economics*, 55(1), 57-80.

Cronin, S.J., D.R. Gaylord, D. Charley, B.V. Alloway, S. Wallez, & J.W. Esau. (2004). Participatory methods of incorporating scientific with traditional knowledge for volcanic hazard management on Ambae Island, Vanuatu. *Bulletin of Volcanology* 66(7): 652–668.

d'Errico, M., Garbero, A., & Constas, M. (2016). *Quantitative Analyses for Resilience Measurement. Guidance for constructing variables and exploring relationships among variables*. Resilience measurement technical Working Group. Technical series no. 7. Rome: food security information network.

d'Errico, M., Romano, D., & Pietrelli, R. (2018). Household resilience to food insecurity: evidence from Tanzania and Uganda, *Food Security*, 10(4), 1033–1054.

Davidson, D. J. (2010). The Applicability of the Concept of Resilience to Social systems: Some Sources of Optimism and Nagging Doubts. *Society & Natural Resources*, 23(12), 1135-1149.

Davies, J., Robinson, L.W., & Ericksen, P.J. (2015). Development process resilience and sustainable development: insights from the Drylands of Eastern Africa. *Society & Natural Resources*, 28, 328–343.

Davoudi S. (2012). Resilience: A Bridging Concept or a Dead End? *Planning Theory & Practice* 13(2): 299–333

Dercon, S. & Krishnan, P. 2004 Food aid and informal insurance. *in* Dercon, S. (Ed.) *Insurance against poverty*. Oxford: Oxford University Press.

Devereux, S. & Getu, M. (2013). *Informal and Formal Social Protection Systems in Sub-Saharan Africa*. Addis Ababa: Organisation for Social Science Research in Eastern and Southern Africa (OSSREA).

Devereux, S., Roelen, K., Béné C. Chopra D., Leavy, J., & McGregor J.A. (2013). *Evaluating outside the box: An alternative framework for analysing social protection programmes*. IDS Working Paper No.431 Brighton: Institute of Development Studies, 26 p.

DeVerteuil G. & Golubchikov O. (2016) Can resilience be redeemed? Resilience as a metaphor for change, not against change *City* 20(1): 143-151.

Department for International Development (DFID). (2011). *Defining Disaster Resilience: A DFID Approach Paper*. London: Department for International Development.

Elliott, J., Haney, T., & Sams-Abiodun, P. (2010). Limits to Social Capital: Comparing Network Assistance in Two New Orleans Neighborhoods Devastated by Hurricane Katrina. *Sociological Quarterly*, 51(4), 624-648.

FAO. (2013). *Resilient Livelihoods – Disaster Risk Reduction for Food and Nutrition Security Framework Programme*. Food and Agriculture Organization.

Frankenberger, T., & Nelson, S. (2013). *Background Paper for the Expert Consultation on Resilience Measurement for Food Security*. TANGO International, Rome, Food and Agricultural Organization and World Food Program.

Frankenberger, T. & Smith, L. (2015). *Ethiopia Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) project impact evaluation*. Report of the interim monitoring survey 2014-2015 November 2015. Washington, DC: USAID Feed the Future.

Gaillard J.-C., (2007). Resilience of traditional societies in facing natural hazards. *Disaster Prevention and Management*, 16(4), 522-544.

Given L.M. (2008). *The SAGE Encyclopedia of Qualitative research methods*, Vol1 &2, University of Alberta, SAGE publication, 1014 p.

Habtom, G.K. & Ruys P. (2007). Traditional risk –sharing arrangements and informal social insurance in Eritrea. *Health Policy*, 80, 218-235.

Hewitt, K. (1983). The idea of calamity in a technocratic age. In *Interpretations of calamity from the viewpoint of human ecology*, ed. K. Hewitt, 3–32. London: Ellen & Unwin.

Hoddinott, J., 2006. Shocks and their consequences across and within households in Rural Zimbabwe. the Journal of Development Studies, 42 (2), 301–321.

Hypher, N. (2011). Impact of cash transfers on children – the role of social relations and intra-household *dynamics: findings from a Save the Children study*. ODI lunchtime seminar. London: ODI. 6 May. [www.odi.org.uk/events/documents/2635-presentation-nicola-hypher.pdf]

Kelman, I., & T.A. Mather. (2008). Living with volcanoes: The sustainable livelihoods approach for volcano-related opportunities. *Journal of Volcanology and Geothermal Research* 172(3–4): 189–198.

Komter, A. (2007). Gifts and social relations: the mechanisms of reciprocity. *International Sociology*, 22(1), 93-107.

Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society & Natural Resources*, 23, 401-406.

Macauslan, I. & Riemenschneider, N. (2011) Richer but Resented: What do Cash Transfers do to Social Relations? *IDS Bulletin*, 42(6), 60-66.

Maxwell, D., Constas, M., Frankenberger, T., Klaus, D. & Mock, M. (2015). *Qualitative Data and Subjective Indicators for Resilience Measurement*. Resilience Measurement Technical Working Group. Technical Series No. 4. Rome: Food Security Information Network.

Levine, E., Vaughan, E., & Nicholson, D. (2017). *Strategic Resilience Assessment Guidelines*. Portland, OR: Mercy Corps

Mitchell, J. C. (ed.) 1969. *Social networks in urban situations: analyses of personal relationships in central African towns*. Manchester: published for the Institute for Social Research, University of Zambia by Manchester U.P.

Ngwenya, B.N. (2003). Redefining Kin and Family Social Relations: Burial Societies and Emergency Relief in Botswana. *Journal of Social Development in Africa*, 18(1), 85-110.

Pavanello, S., Watson, C., Onyango-Oumac, W., & Bukulukid, P. (2016). Effects of Cash Transfers on Community Interactions: Emerging Evidence. *The Journal of Development Studies*, 52(8), 1-15.

Pelletier, B., Hickey, G. M., Bothi, K. L. & Mude, A. (2016). Linking rural livelihood resilience and food security: an international challenge. *Food Security*, 8(3), 469–476.

Prowse, M., & Scott, L. (2008). Assets and adaptation: an emerging debate. *IDS Bulletin*, 39 (4), 42–52.

Putman R. (1995). Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6(1), 65-78

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster.

Rampengan, M.M.F., Boedhihartono, A., K., Law, L., Gaillard, J.-C., & Sayer J. (2014). Capacities in facing natural hazards: a Small Island perspective. *International Journal of Disaster Risk Science*, 5(4), 247–264.

Rose A., (2004). Defining and measuring economic resilience to disasters. *Disaster Prevention and Management*, 13(4), pp.307-314.

Schwarz, A. M., C. Béné, G. Bennett, D. Boso, Z. Hilly, C. Paul, R. Posala, S. Sibiti, & N. Andrew. (2011). Vulnerability and resilience of rural remote communities to shocks and global changes: empirical analysis from the Solomon Islands. *Global Environmental Change*, 21, 1128-1140.

Smith L., Frankenberger T., Langworthy B., Martin S., Spangler T., Nelson S., & Downen J. (2015). *Ethiopia Pastoralist Areas Resilience Improvement and Market Expansion (PRIME) Project impact evaluation: baseline survey report*. Feed the Future FEEDBACK project report for USAID.

Tebboth M.G.L., Conway, D., & Adger W.N. (2019). Mobility endowment and entitlements mediate resilience in rural livelihood systems. *Global Environmental Change*, 54, 172-183.

Trivers, R.L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology*, 46, 35–57.

UNDP (2013). *Community Based Resilience Assessment (CoBRA) Conceptual Framework and Methodology*. United Nations Development Programme.

USAID (2012). *Building Resilience to Recurrent Crisis USAID Policy and Program Guidance*. US Agency for International Development, 32 p.

von Grebmer, K., D. Headey, C. Béné, L. Haddad et al. (2013). *2013 Global Hunger Index: The Challenge of Hunger: Building Resilience to Achieve Food and Nutrition Security*. Bonn, Washington, DC, and Dublin: Welthungerhilfe, International Food Policy Research Institute, and Concern Worldwide.

WFP, (2013). Building resilience through asset creation, resilience and prevention. Unit Policy, Programme and Innovation Division. World Food Program, Rome (23 p).

Wilson, G. (2012). *Community resilience and environmental transitions*. London, England: Earthscan from Routledge Press.

White I. & O'Hare P. (2014) From Rhetoric to Reality: Which Resilience, Why Resilience, and Whose Resilience in Spatial Planning? *Environment and Planning C: Politics and Space* 32(5): 934–950

Wisner, B., Gaillard J.C., & Kelman I. (2012). Framing disaster: Theories and stories seeking to understand hazards, vulnerability and risk. In B. Wisner, J.C. Gaillard, & I. Kelman (eds.) *Handbook of hazards and disaster risk reduction*, London: Routledge (pp.18–34).

Woodson, L., Frankenberger, T., Smith, L., Langworth, M. & Presnall, C. (2016). *The Effects of Social Capital on Resilience Capacity: Evidence from Ethiopia, Kenya, Uganda, Niger and Burkina Faso*. Technical Report Series No 2: Strengthening the Evidence Base for Resilience in the Horn of Africa. Nairobi, Kenya: A joint International Livestock Research Institute (ILRI) and TANGO International publication.

**Table 1**. Contribution of RISE activities to the resilience of people. Positive examples from the FGDs and KIIs (in no particular order).

| RISE activities | Impact pathways | Direct beneficiaries | The event | Reference |
|---|---|---|---|---|
| Developing of rice production in lowlands | With the recurrence of drought, the lowlands become the main production site on which farmers rely because it always maintains moisture. Rice production compensates for the shortfall in sorghum plots. "Rice production will reduce the suffering we should endure, we can sell rice to buy sorghum or maize). If the lowlands did not exist, most heads of household would turn to cattle for food; making them even more vulnerable". | Farmers, landowners in lowlands | Drought | male FGD village S, village D, and village K; female FGD village D, and village K; KI No.1 and KI No.2 village K. |
| Training on culture techniques (e.g. *zaï*), school fields | The *zaï* allow cultivation on arid and poor soil. The fertilizer allows the crop to grow and evolve normally even with little rain. So "*Zaï* help crops resist drought" without significantly affecting yields. "The construction of these structures in our fields will enable our plots to withstand the shortage of rainfall, which will improve agricultural yields. And the increase will allow many households not to feel the rising grain prices". | Members of agricultural producer groups (composed of heads of households) | Drought | male and female FGDs village S; KI No.2 village S; female FGD and KI No.1 and KINo.2 village F; male FGD and KI No.2 village A; male and female FGD village D; FGD male and KI No.1 and KI No.2 village K. |
| Culinary demonstrations; Hand washing; Hygiene and Sanitation | Awareness-raising on hygiene, including washbasins, culinary demonstrations, etc. have made it possible to reduce expenditure on the health of the population. This reduction in spending has allowed households to save or direct their money towards the development of IGAs. | Everyone, especially women and children | Disease | female FGD and KI No.2 village S; KI No.1 village F; female FGD and KI No.1 village A; female FGD village K. |
| Self-help group (tontine) | The money received from tontine is used to buy food, or make small trade. This activity also creates savings that can be used in case of difficulties. | Women from the group | Any shock | female FGD village S; KIs No.1 village F and village K; KI No.2 village D. |
| Organic manure and composting | Women and men have been trained in the production and use of organic manure. This practice allows to increase yields which allows to keep on until the next season.<br>The production of compost is used for the fertilization of arable land. Soil fertilization increases its ability to retain moisture, which allows the soil to resist drought. | Members of the producer groups beneficiaries of this activity | Drought | female FGD village S; FDG male village K. |
| *Habanayé* | This system allows the poorest households to build up or rebuild a pastoral capital which they can sell partly to buy food in case of | Women and men benefiting from this activity | Any shock | female FGD and KI No.2 village S ; female FGD village |

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| | difficulty or to carry out another activity. | | | A. |
| Sensitization and donation of food and infant meal to pregnant and lactating women | Pregnant women need to eat well to maintain good health and lactating women to produce more milk. In addition, advice is provided for cooking (e.g. porridge for children), hygiene and sanitation. All these actions help preserve the health of mothers and children, so “child malnutrition has fallen sharply". These activities help to maintain good health, thus reducing healthcare spending and increasing the food and nutritional security of children. | Pregnant and lactating women | Disease and malnutrition | FGD female village F; female FGD, KI No.1; KI No.2 village D; KI No.1 village K. |
| Construction of improved fireplaces | Improved fireplaces requiring less wood protects the forest. Since the excessive cutting of wood is reduced, the forest is preserved, which has a positive effect on rainfall. | Everyone | Drought | female FGD village F. |
| Cash donations to inactive individuals/households | This money was used to buy food and reduce food insecurity. | People in need (blind, elderly, inactive) and heads of vulnerable households (men and women) | Any shock | female FGD and KI No.2 village F. |
| Animal donations (sheep, poultry) | The beneficiaries of the donations can sell the animals to buy food. The livestock / poultry donation enhances the income diversity that will be used to purchase food in the event of prolonged drought. With the sale of chickens, poor women have enough money to buy food with the scarcity caused by drought and flooding, helping to educate their children with the hope that they will find wage labour and help them get out of poverty. | The members of the group benefiting from this activity (mostly women) | Any shock | KIs No.2 village F and village D; male FGD village A. |
| Training on mowing techniques and hay conservation, donation of miller's bran. | Activities enable households to take care of their livestock during the drought period. The bran granted will be a food supplement. Mowing and hay conservation will allow livestock farmers to have fodder for their livestock during periods of food shortage. The bran that REGIS-ER has given will help livestock owners to feed their cattle until the arrival of the rainy season. | The direct beneficiaries of this actions are the beneficiaries of *Habanayé* but in the long term it is all the livestock owners because these not direct beneficiaries replicate what the beneficiaries do. | Drought | male FGD and KI No.2 village A. |
| Sensitization of the population about livestock diseases and | Sensitization and information about the risk periods of livestock and poultry epidemics allows households to take measures (vaccination) to deal with epidemics. | Farmers' groups, households of women beneficiaries of small ruminants and poultry interventions are the main | Epizooty | male FGD village A. |

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| favourable periods for vaccination. | | beneficiaries of these activities. | | |
| Donation of seeds (millet and sesame). | Women practice the cultivation of seed varieties in collective fields. After the sale, the money is put aside. This is a part of the money that women have used to buy caustic soda and are now awaiting training in making soap with it. | The women members of these groups. These groups are open to all. | Any shock | female FGD village A. |
| Census of flood victims and donations of food or poultry. | After the floods, the victims received vouchers and food donations to replenish stocks that were washed away by the water. | The flood victims. | Flood | male FGD and KI No.1 village D. |
| Training on improved rice seeds for men. | This training enabled the beneficiaries to learn improved seed production techniques adapted to different soils such as low-land rice, high-land etc., which then makes those techniques available to village producers in case of drought. Yields also increase. | All producers of rice in the low-lands. | Drought | KI No.2 village D; male and female FGD village K. |

* The second column contains direct quotes from interviews and FGDs, complemented by comments and notes by the evaluation team.